

# CULINARY FOOD SCIENCE (AGLS)

The Culinary Food Science degree program is a food science-based degree in which students develop basic culinary skills along with knowledge of the accompanying sciences. As a graduate, you'll combine food product development skills and entrepreneurial talents with scientific and technological knowledge.

The department also offers a culinary food science minor (<http://catalog.iastate.edu/collegeofagricultureandlifesciences/foodscienceandhumannutrition/#undergraduateminortext>).

## Student Learning Outcomes

Upon graduation, students should be able to:

- Communicate effectively in their field of study using written, oral, visual and/or electronic forms.
- Demonstrate proficiency in ethical data collection and interpretation, literature review and citation, critical thinking and problem solving.
- Participate effectively in a group or team.
- Integrate creativity, innovation, or entrepreneurship in ways that produce value.
- Describe sociocultural competence relative to diversity, equity and/or inclusion.
- Explain how human activities impact the natural environment and how societies are affected.
- Meet program specific learning outcomes for the Culinary Food Science major.

## Degree Requirements

Administered by the Department of Food Science and Human Nutrition

### Total Degree Requirement: 120 cr.

Students must fulfill International Perspectives and U.S. Diversity requirements by selecting coursework from approved lists. These courses may also be used to fulfill other area requirements. Only 65 cr. from a two-year institution may apply to the degree which may include up to 16 technical cr.; 9 P-NP cr. of electives; 2.00 minimum GPA.

#### International Perspectives: 3 cr.

#### U.S. Diversity: 3 cr.

#### Communications and Library: 10 cr.

|                      |   |           |
|----------------------|---|-----------|
| ENGL 1500            | Critical Thinking and Communication               | 3         |
| ENGL 2500            | Written, Oral, Visual, and Electronic Composition | 3         |
| LIB 1600             | Introduction to College Level Research            | 1         |
| SPCM 2120            | Fundamentals of Public Speaking                   | 3         |
| <b>Total Credits</b> |   | <b>10</b> |

#### Humanities and Social Sciences: 9-15 cr.

|           |                              |   |
|-----------|------------------------------|---|
| FSHN 2200 | American Food and Culture    | 3 |
| ECON 1010 | Principles of Microeconomics | 3 |

If a Culinary Food Science student in the College of Human Sciences, select:

- Additional Humanities course
- Additional Humanities or Social Science course

#### Ethics: 3 cr. (Included as part of the Humanities and Social sciences requirement)

|           |                                     |   |
|-----------|-------------------------------------|---|
| FSHN 3420 | World Food Issues: Past and Present | 3 |
|-----------|-------------------------------------|---|

#### Mathematical Sciences: 6-8 cr.

Select at least 3 credits from: 3-4

|           |                          |  |
|-----------|--------------------------|--|
| MATH 1400 | College Algebra          |  |
| MATH 1430 | Preparation for Calculus |  |
| MATH 1600 | Survey of Calculus       |  |
| MATH 1650 | Calculus I               |  |

Select at least 3 credits from: 3-4

|           |                            |  |
|-----------|----------------------------|--|
| STAT 1010 | Principles of Statistics   |  |
| STAT 1040 | Introduction to Statistics |  |

**Total Credits 6-8**

#### Physical Sciences: 9 cr.

|            |   |   |
|------------|---|---|
| CHEM 1630  | College Chemistry                               | 4 |
|            | or CHEM 1770 General Chemistry I                |   |
| CHEM 1630L | Laboratory in College Chemistry                 | 1 |
|            | or CHEM 1770L Laboratory in General Chemistry I |   |
| CHEM 2310  | Elementary Organic Chemistry                    | 3 |
| CHEM 2310L | Laboratory in Elementary Organic Chemistry      | 1 |

**Total Credits 9**

#### Biological Sciences: 10-11 cr.

|             |   |     |
|-------------|---|-----|
| BBMB 3010   | Survey of Biochemistry                  | 3   |
| BIOL 2120   | Principles of Biology II                | 3   |
| BIOL 2120L  | Principles of Biology Laboratory II     | 1   |
| MICRO 2010  | Introduction to Microbiology            | 2-3 |
|             | or MICRO 3020 Biology of Microorganisms |     |
| MICRO 2010L | Introductory Microbiology Laboratory    | 1   |
|             | or MICRO 3020L Microbiology Laboratory  |     |

**Total Credits 10-11**

#### Animal Science Coursework: 6 cr.

|           |                                   |   |
|-----------|-----------------------------------|---|
| ANS 2700  | Foods of Animal Origin            | 2 |
| ANS 2700L | Foods of Animal Origin Laboratory | 1 |

|          |   |   |
|----------|---|---|
| ANS 4600 | Science and Technology of Value Added Meat Products | 3 |
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**Total Credits** **6**

**Food Science and Human Nutrition: 42 cr.**

|  |   |   |
|--|---|---|
| FSHN 1010  | Food and the Consumer   | 3 |
| FSHN 1040  | Introduction to Professional Skills in Culinary Science   | 1 |
| FSHN 1100  | Professional and Educational Preparation  | 1 |
| FSHN 1670  | Introductory Human Nutrition and Health   | 3 |
| FSHN 2030  | Contemporary Issues in Food Science and Human Nutrition   | 1 |
| FSHN 2140  | Scientific Study of Food  | 3 |
| FSHN 2150  | Advanced Food Preparation Laboratory  | 2 |
| FSHN 2650  | Nutrition for Active and Healthy Lifestyles   | 3 |
| FSHN 3050  | Food Quality Management and Control   | 2 |
| FSHN 3110  | Food Chemistry  | 3 |
| FSHN 3110L                                       | Food Chemistry Laboratory   | 1 |
| FSHN 3140  | Professional Development for Culinary Food Science and Food Science Majors                        | 1 |
| FSHN 4030  | Food Laws and Regulations   | 2 |
| FSHN 4060  | Sensory Evaluation of Food  | 3 |
| FSHN 4070  | Microbiological Safety of Foods of Animal Origins   | 3 |
| FSHN 4110  | Food Ingredient Interactions and Formulations   | 2 |
| FSHN 4120  | Food Product Development  | 3 |
| FSHN 4200  | Food Microbiology   | 3 |
| Take one of the following courses for 2 credits: |   | 2 |
| FSHN 4910B                                       | Supervised Work Experience: Food Science or FSHN 491 Supervised Work Experience: Culinary Science |   |

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**Total Credits** **42**

**Hospitality Management: 12 cr.**

|              |  |   |
|--------------|--|---|
| HSPM 1330    | Food Safety Certification                  | 1 |
| HSPM 3800    | Food Production Management                 | 3 |
| HSPM 3800L   | Food Production Management Experience      | 3 |
| HSPM 3830    | Wine and Spirits in Hospitality Management | 2 |
| or FSHN 5090 | Sensory Evaluation of Wines                |   |
| HSPM 4870    | Fine Dining Management                     | 3 |

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**Total Credits** **12**

**Electives 1-13 cr. Select from any university coursework to earn at least 120 total credits.**

Go to FSHN courses. ([http://catalog.iastate.edu/azcourses/fs\\_hn/](http://catalog.iastate.edu/azcourses/fs_hn/))

**Culinary Food Science, B.S.**

**First Year**

| Fall        | Credits | Spring     | Credits |
|-------------|---------|------------|---------|
| FSHN 1100   | 1       | FSHN 1040  | 1       |
| CHEM 1630   | 4       | FSHN 1670  | 3       |
| or 1770     |         |            |         |
| CHEM 1630L  | 1       | BIOL 2120  | 3       |
| or 1770L    |         |            |         |
| FSHN 1010   | 3       | BIOL 2120L | 1       |
| MATH 1400,  | 3-4     | ECON 1010  | 3       |
| 1430, 1600, |         |            |         |
| or 1650     |         |            |         |
| ENGL 1500   | 3       | STAT 1040  | 3-4     |
|             |         | or 1010    |         |
| LIB 1600    | 1       |            |         |

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**16-17**

**14-15**

**Second Year**

| Fall       | Credits | Spring      | Credits |
|------------|---------|-------------|---------|
| CHEM 2310  | 3       | FSHN 2650   | 3       |
| CHEM 2310L | 1       | BBMB 3010   | 3       |
| ENGL 2500  | 3       | MICRO 2010  | 2-3     |
|            |         | or 3020     |         |
| FSHN 2030  | 1       | MICRO 2010L | 1       |
|            |         | or 3020L    |         |
| FSHN 2200  | 3       | FSHN 2140   | 3       |
| HSPM 1330  | 1       | FSHN 2150   | 2       |
| SPCM 2120  | 3       |             |         |

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**15**

**14-15**

**Third Year**

| Fall       | Credits | Spring                                      | Credits | Summer     | Credits |
|------------|---------|---|---------|------------|---------|
| ANS 2700   | 2       | FSHN 3050                                   | 2       | FSHN 4910B | 2       |
|            |         |   |         | or 4910D   |         |
| ANS 2700L  | 1       | FSHN 4030                                   | 2       |            |         |
| FSHN 3110  | 3       | HSPM 3800                                   | 3       |            |         |
| FSHN 3110L | 1       | HSPM 3800L                                  | 3       |            |         |
| FSHN 3140  | 1       | Humanities                                  | 3       |            |         |
|            |         | or social science (HSCI) or elective (AGLS) |         |            |         |
| FSHN 4110  | 2       | Elective*                                   | 3       |            |         |
| FSHN 4200  | 3       |   |         |            |         |

|  |                |   |                |
|--|----------------|---|----------------|
| Electives *  | 1-3            |   |                |
|  | <b>14-16</b>   | <b>16</b>                                       | <b>2</b>       |
| <b>Fourth Year</b>                                     |                |   |                |
| <b>Fall</b>  | <b>Credits</b> | <b>Spring</b>                                   | <b>Credits</b> |
| FSHN 4060  |                | 3 ANS 4600                                      | 3              |
| FSHN 4070  |                | 3 FSHN 3420                                     | 3              |
| FSHN 4910B<br>or 4910D<br>(if not yet<br>completed)    |                | 2 FSHN 4120                                     | 3              |
| HSPM<br>3830 (if<br>not taking<br>FSHN 5090<br>Spring) |                | 2 Humanities<br>(HSCI) or<br>Elective<br>(AGLS) | 3              |
| HSPM 4870  |                | 3 Elective *                                    | 3              |
| U.S.<br>Diversity                                      |                | 3   |                |
|  | <b>16</b>      | <b>15</b>                                       |                |

\* Choose elective courses to total equal to or greater than 120 credits.  
 Planned course offerings may change and students need to check the online Schedule of Classes each term to confirm course offerings: <https://classes.iastate.edu> (<https://classes.iastate.edu>). This sequence is only an example. The number of credits taken each semester should be based on the individual student's situation. Factors that may affect credit hours per semester include student ability, employment, health, activities, and grade point consideration.

More information on the Culinary Food Science minor can be found here: [www.catalog.iastate.edu/collegeofagricultureandlifesciences/foodscienceandhumannutrition/#undergraduateminortext](http://catalog.iastate.edu/collegeofagricultureandlifesciences/foodscienceandhumannutrition/#undergraduateminortext) (<http://catalog.iastate.edu/collegeofagricultureandlifesciences/foodscienceandhumannutrition/#undergraduateminortext>).